

A REPORT



After successfully holding its 7th Annual Global Convention on 'Leadership for Business Excellence & Innovation' in Dubai from March 5 - 7, 2019, the Institute Of Directors (IOD), India held its '21st Annual World Congress on Environment Management and Climate Change' in Hotel JW Marriott, Bengaluru, India from July 4 - 5, 2019. The theme of the Conference was: '*Collaborative Leadership for Environment Protection & Climate Change: Strategy for Creative Solutions*'. The famed Golden Peacock Awards for 'Eco-Innovation (GPEIA) and Energy Efficiency (GPAEE)' were also presented at the end of Inaugural session on the first day, while the Awards for 'Environment Management (GPEMA) and Occupational Health & Safety (GPOHSA)' were presented to the winners amongst business and industry, during the **Golden Peacock Awards Nite** on the same day.

The Opening Remarks were delivered by **Mr. Arun Balakrishnan**, Chairman, IOD - Bengaluru Chapter, Founder Chairman & Independent Director, HPCL-Mittal Energy (HMEL) & former CMD, HPCL. **H.E. Upendra Tripathy, IAS (retd.)**, Director General, International Solar Alliance (ISA), New Delhi and former Secretary, Ministry of New and Renewable Energy, Govt. of India delivered the Special Address and **Mr. Ovais Sarmad**, Assistant Secretary-General & Deputy Executive Secretary, United Nations Framework Convention on Climate Change (UNFCCC), addressed the Evening Session. Mr. Sarmad had specially

flown in from New York to address the World Congress.

Mr. R. V. Deshpande, Hon'ble Minister for Revenue & Skill Development, Govt. of Karnataka was the Chief Guest.

Mr. T. M. Vijay Bhaskar, IAS, Chief Secretary, Govt. of Karnataka was the Guest of Honour.

It was a largely attended Congress, with around 550 experts, delegates and environmentalists from all over India and abroad, who participated in the two-day Congress. Seven countries were represented (USA, UK, Germany, Netherlands, UAE, Israel and India). REPUBLIC TV Channel was the TV Media Partner, for the entire event.

The local State Government was officially represented at the level of the Chief Secretary, along with a large number of senior officials, Principal Secretaries and CMDs/CEOs of well-managed State PSUs. A large number of Central PSUs also participated. The list of such participants is given elsewhere in this Issue.

DAY-1: THURSDAY, JULY 4, 2019

Plenary Session I: Opening Session

Mr. Arun Balakrishnan welcomed the gathering. He said that the world continues to witness global warming, snow melting and adverse climate change for the last several years. Damage control is in vogue by Government and private industries. He gave some examples of the



Lighting of the Lamp by Distinguished Guests (From R to L) - **Mr. T. M. Vijay Bhaskar, IAS**, Chief Secretary, Govt. of Karnataka, **Mr. Arun Balakrishnan**, Chairman, IOD - Bengaluru Chapter, founder Chairman & Independent Director, HPCL-Mittal Energy Ltd. (HMEL) & former CMD, HPCL, **H.E. Upendra Tripathy, IAS (retd.)**, Director General, International Solar Alliance (ISA) and former Secretary, Ministry of New and Renewable Energy, India, **Mr. M. V. Rajasekhara**, Director - Mining & Construction, BEML Limited



Lt. Gen. J. S. Ahluwalia, PVSM (retd.)
President
Institute Of Directors, India



Mr. Arun Balakrishnan
Chairman, IOD - Bengaluru Chapter
founder Chairman & Independent Director,
HPCL-Mittal Energy Ltd. (HMEI)
& former CMD, HPCL



Mr. M. V. Rajasekhar
Director - Mining & Construction
BEM Limited



H.E. Upendra Tripathy, IAS (retd.)
Director General
International Solar Alliance (ISA) and former
Secretary, Ministry of New and Renewable
Energy, Govt. of India



Mr. T. M. Vijay Bhaskar, IAS
Chief Secretary
Govt. of Karnataka

recently witnessed consequences of climate change, such as - Mumbai experiencing entire month's rain in one day, Chennai city running out of water, empty reservoirs in Bengaluru, record temperatures in France and Europe. All this shows that much needs to be done. He added that in discussing all these issues, the two day conference should highlight the efforts needed.

He added: "Shifting to LEDs, use of building automation systems, reduction of transportation demands by city population, reducing densification through smart planning, alternatives to use of private vehicles, improvement in waste management techniques, etc is the need of the hour".

Mr. Prakash Javadekar, Hon'ble Minister of Environment, Forest and Climate Change, Govt. of India (in absentia) sent his recorded video message to the Congress. Wishing it all success, he said "Indians by tradition are environment-friendly". However, people are forgetting traditions in saving energy and water. Quoting Mahatma Gandhi, he said 'Nature provides enough for man's needs but not enough for his greed'. He asserted that Government of India is committed to the Paris

Accord in meeting the 'climate protection targets set for 2030'. These steps include achieving 40 % energy needs through renewable energy sources, and reduction in energy intensity by 33 to 35 % even while consumption is increasing by 20 to 30 %. He urged that "people's actions must supplement the Government's actions". Measures taken in this regard include - work place near the home, strict implementation of Pollution Under Control (PUC) certificate for vehicles, improving road network and better connectivity. He cited the recent instance of 'Lake on fire' in Bengaluru city, a cause for deep national concern.

Acclaiming IOD's Golden Peacock Award, Mr. Javadekar noted this as one example of 'Participative Management'. He hoped that the conclusions of the seminar would provide useful and actionable inputs for all.

Lt. Gen. J. S. Ahluwalia, PVSM (retd.), President, Institute Of Directors (IOD), India in his President Address highlighted that the role of IOD is to prepare 'Board-ready Directors' and Future-ready Boards'. He noted that competition brings out the best, and this is seen in the increasing numbers of the Golden Peacock Award applications. IOD conducts annual conferences on different subjects, which are burning issues of the day in multi-locations: London, Singapore and Dubai, apart from various metros in India. He informed that these conferences are not just events, but a powerful communication medium. Referring to Global & National Golden Peacock Awards, he informed the gathering that while there are 15 Golden Peacock Awards in different corporate verticals. Awards in four categories were being presented in the ongoing World Congress.

He further noted that a host of environmental problems being faced in 21st century, originated in the 20th century. Not much care was shown to environment till 1970s. He referred to the first Global Treaty signed in 1972, as a part of UN Conference on the Human Environment - when issues such as ocean pollution, environmental degradation, etc were for the first time debated extensively in an international forum. He cautioned that at present there exists mindless exploitation of natural



Lt. Gen. J. S. Ahluwalia, PVSM (retd.), President, Institute Of Directors, India presenting the IOD Memento to **Mr. T. M. Vijay Bhaskar, IAS**, Chief Secretary, Govt. of Karnataka



Recorded Video Message by **Mr. Prakash Javadekar**, Hon'ble Minister of Environment Forest and Climate Change, Govt. of India, being played during the Congress

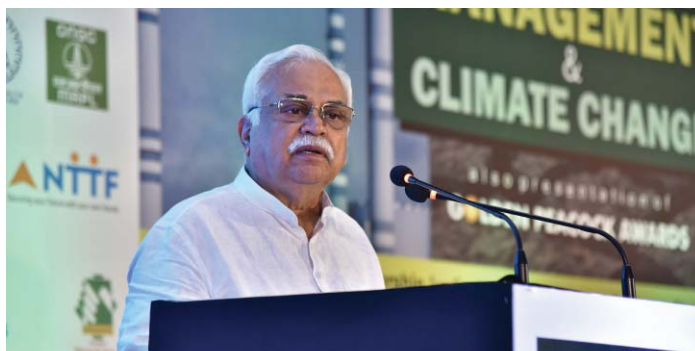
resources that are finite. "Natural capital comprising mountains, glaciers, rivers etc, are very precious and 'Nature's services' in the form of water, light, and air have no price tag". He added that India's population is 17% of world population, but holds only 4 % of fresh water resources. The expenditure on environment related ill-health problems consumed 4% of GDP as per one estimate. He referred to Indian Prime Minister's observation that we as a nation are failing to capture flood waters in Yamuna or Mumbai rain – which are examples of national wastage. In respect of solid waste management, source segregation is still to catch up. Huge investments to the tune of \$ 2.6 trillion are required by India to undertake actions on environment protection commitments. In China, Beijing is now out of the list of 'most polluted cities' due to concerted actions by the local Govt. In India, 100

cities are identified to become smart cities, but smog continues to choke urban areas.

The IOD shared with the international audience the Gandhian thought on the main theme: **'Climate has not changed. It is we who have changed, the way we live, the way we work, and the way we consume.'**

Mr. M. V. Rajasekhar, Director – Mining & Construction, BEM Limited referred the audience to the views of former US Vice President Al Gore, by playing his famous film "Inconvenient Truth". He said the contents of the film are equally relevant today. Giving the example of Bengaluru, he observed the city chokes. Storm water is not properly directed, with scenes full of 'unplanned urbanisation'. Global warming, according to an estimate, contributes to a loss of more than \$ 4 trillion to the world's GDP. He said three agents – 'People, Industry and Government' have a stake in improving 'products and processes' to make efficient alternatives. He suggested suitable amendments be brought in Schedule-VII of Companies Act, 2013, to account for environmental stability-related investments. He listed the efforts undertaken by BEM in respect of environment protection such as – using 100% LED bulbs, green energy production through windmills and kitchen supported biogas plants, rain water harvesting on its campus, encouraging innovation in waste management as well as green energy production etc.

H.E. Mr. Upendra Tripathy, IAS (retd.) in his Special Address, said that India is lucky to have this ISA mechanism, an outcome of Paris Declaration. ISA treaty has been signed by 75 countries, of them 54 have ratified the ISA framework. Currently, India is the President of the Alliance, while France holds the Vice-President's post.



Mr. R. V. Deshpande
Hon'ble Minister for Revenue & Skill Development
Govt. of Karnataka



Mr. R. V. Deshpande, Hon'ble Minister for Revenue & Skill Development, Govt. of Karnataka releasing the Congress Souvenir. Also seen, **Lt. Gen. J. S. Ahluwalia, PVSM (retd.)**, President, Institute Of Directors, India



Mr. R. V. Deshpande, Hon'ble Minister for Revenue & Skill Development, Govt. of Karnataka interacting with one of the partners during the Congress



Mr. S. Srinivasan, IAS (retd.)
former Secretary to Govt. of India
& Member (Finance)
Indian Space Research Organisation (ISRO)



Mr. Satyaki Raghunath
Chief Strategy & Development Officer
Bangalore International Airport Limited (BIAL)



Mr. B. V. Sudharshan
Director
Nettur Technical Training Foundation (NTTF)



Mr. K. Devender Reddy
Vice President
Tata Coffee Limited

“Solar is the solution”, he added, to meet the energy needs of about 1 billion plus population of India. With no access to clean fuel, over 3 billion households use firewood or cow dung for cooking across the world. ISA is mobilising 'investment capital' to the tune of \$ 1 trillion that would help Least Developed Countries (LDCs). Besides, ISA is helping in acquiring 270,000 solar pumps, 1 billion solar cookers and 1 billion street light LED bulbs. Another focus of ISA is in generating awareness among the people for use of Green Energy and aiming for 'Universal Energy Access'. He added that the efforts in Solar Technology Development would lead to 'Near Zero Energy Cost'.

Mr. T. M. Vijaya Bhaskar, IAS in his Guest of Honour address, warned against population explosion. He said the population of India at the time of Independence in 1947 was around 300 million, while the same has risen to over 1300 million as of now. He highlighted that action is needed by governments, private institutions, industries and individuals to combat the ill-effects of environmental damage. He noted that India's contribution to the carbon emissions is much less than global average, but within the country, asymmetry exists in carbon emission among different states / regions. Referring to the good examples of corporations such as BEML, Toyota Kirloskar and others in undertaking action to save the environment, He quoted **Mahatma Gandhi - 'Be the change, you wish to see in the world'**.

He advocated that while industry shall strive for being 'water neutral', every household should adopt rain water harvesting as a compulsory feature. He gave an example of monetary incentive in his own state of Karnataka- if a tree is planted and survives for three years, the planter is rewarded with Rs. 100. He called for wider use of public transport, shunning private vehicles. Other initiatives in his State, that he listed for better environment include - encouraging organic farming, banning use of plastics, incentivising enterprises for green initiatives, investing in Metro for transport, promoting research for zero based natural farming etc. “Karnataka govt. has made a policy that the State secretariat will not use plastic water bottles, and will use only reusable bottles”.

Plenary Session II: Inaugural Session

Lt. Gen. J. S. Ahluwalia welcomed the Chief Guest, **Mr. R. V. Deshpande**, Hon'ble Minister for Revenue & Skill Development, Govt. of Karnataka. Introducing the dignitary, he thanked him for the support of Karnataka government and, in particular, his pioneering role in the cause of environment protection.

Mr. Deshpande expressed that the subject of Environment and Climate Change is a serious concern across the globe. Referring to the Mann-Ki-Baat (monthly address over All India Radio to the nation by Prime Minister), Mr. Deshpande stated that both Human Resources and Water Resources are scarce. For healthy human / wild life, he maintained that “adopting clean / green solutions is a must”. He said the desilting of lakes in his state had not been carried out for decades, while filling of lakes and recharging the aquifers with rain water have assumed great priority. He advocated recognising 'Agriculture as Industry' for remunerative prices of farm produce. He added this would arrest migration of labour to urban areas, helping in reducing urban pollution.

After the Chief Guest's Address, the **Golden Peacock Eco-Innovation and Energy Efficiency Awards**, in different business sectors were presented to the winning organisations. Institution - wise detailed list of winners of Eco-Innovation and Energy Efficiency have been listed separately in this Issue. All Awardees received the Awards in person.

The Opening session concluded with the Chief Guest, **Mr. R. V. Deshpande** releasing the 'Congress Souvenir and 'Winners Digest' on Environment Management, Eco-Innovation & Energy Efficiency and Occupational Health & Safety, in the presence of the large gathering.

Plenary Session III: Environment Governance – 'Global Nature of Environment Crisis'

The Session was Chaired by

- **Mr. S. Srinivasan, IAS (retd.)**
former Secretary to Govt of India & Member - Finance, Indian Space Research Organisation (ISRO).



From (L to R) - **Hon'ble Justice M. N. Venkatachaliah**, National Chairman, Institute of Directors and former Chief Justice of India & Chairman, National Commission for Constitution of India Reforms, **Hon'ble Justice P. S. Dinesh Kumar**, Judge, High Court of Karnataka and **Mr. R. Madhavan**, Chairman and Managing Director, Hindustan Aeronautics Limited

The other speakers were

- **Mr. Satyaki Raghunath**
Chief Strategy Officer, Bangalore International Airport Limited (BIAL),
- **Mr. B. V. Sudharshan**
Director, Nettur Technical Training Foundation (NTTF), and
- **Mr. K. Devender Reddy**
Vice President, Tata Coffee Limited.

Mr. Srinivasan in his opening remarks stated that both **Passion** and **Knowledge** are needed to combat the environmental crises that have assumed gigantic proportions. Comparing the environmental crises with that of 'touching an elephant', *different perspectives are drawn when the problem is viewed from different angles*.

He outlined the chief concerns in environmental crises as: global warming, greenhouse effect and abnormal rise in global temperature. The major contributor to the problem has been found to be the emission of carbon dioxide (CO₂), released mainly through the use of fossil fuels for combustion.

He further added that the universal problems are: shift in oceanic currents, melting of ice in Arctic and Antarctic zones, receding

Himalayan glaciers, rise in ocean levels and the resultant serious erosion of land mass at some locations, unpredictable weather shifts, wiping out of several species in oceans, as well as on land. It is estimated that by 2050, there would be 200 million 'climate refugees'.

He stressed the need to look at the various indicators to the looming environmental crises. "The cost of action is far less than inaction, and any possible delay will lead to irreversible damage to the environment. Global collaboration and unified action is the need of the hour with well-designed policies. Climate change is the greatest market failure, the world has ever seen".

Mr. Raghunath stated that "we need to view Corporate Social Responsibility (CSR) as Corporate Social Value (CSV)". Quoting the growth in passenger traffic handled by BIAL which stood at 9 million in 2008, 27 million in 2018 and expected to be 80 million in 2028, he pointed out the infrastructure planning for any urban area should cater to fast increasing economic growth. He referred to the 'Earth Overshoot Day', the day when humans have used up more of earth's resources than it can regenerate within one year. Ideally, it should be December 31st of any year. In 2018, it occurred on August 1st itself, according to the Global Footprint Network. In the year 2017, Earth Overshoot Day fell on August 2nd. This advancing date, he said indicates the faster degradation of environment and cause for alarm. "We will soon run out of natural resources".

Measures at BIAL to combat the environmental crises include: use of 100% green source energy by 2020, water recharging to retention ponds, generating organic compost from segregated solid waste, use of LED bulbs for lighting etc. He advocated that Directors should look at "purposes and not profits alone", for safeguarding our future.

Mr. Sudharshan stated that the environment consists of five elements (pancha bhutas, in Sanskrit) – Earth, Water, Wind, Fire and Space in Indian culture. He emphasised the need to take due care of these, both inside the body and in the outside environment. That ensures 'sarva bhoota hita', or in other words, 'welfare of all the species'.



Mr. Dominic McAllister
British Deputy High Commissioner
Bengaluru



Ms. Margit Hellwig-Boette
Consul General of the Federal Republic of
Germany, Bengaluru



Mr. Ariel Seidman
Acting Consul General of Israel to South India



Ms. Suman Sharma
Director & Head – Sustainability Antibiotics –
Asia Pacific, Middle East & Africa
Centrient Pharmaceuticals

Mr. Reddy spoke of 'sustainability governance' as the underlying principle in Tata Coffee. He said all the companies in Tata Group have formed 'Tata Sustainability Group' working together on policies and programmes to comply with SDG goals. Specifically in Tata Coffee, the actions for conservation are: reduction of water for pulping by process improvement, rejuvenation of water bodies, afforestation, zero discharge processing plant, protection and conservation of habitat around the plantation areas for ecological balance, use of LED bulbs for lighting etc.

Plenary Session IV: UN Sustainable Developmental Goals (SDGs) – Business Initiative

The Session was Chaired by

- **Mr. Dominic McAllister**
British Deputy High Commissioner, Bengaluru.

The other speakers were

- **Ms. Margit Hellwig-Boette**
Consul General of the Federal Republic of Germany
- **Mr. Ariel Seidman**
Acting Consul General of Israel to South India
- **Ms. Suman Sharma**
Director & Head – Sustainability Antibiotics – Asia Pacific, Middle East & Africa, Centrient Pharmaceuticals, Netherlands &
- **Mr. Yugal Sikri**
Managing Director, RPG Life Sciences Limited.

Mr. McAllister mentioned that the 17 SDG goals and 239 targets have come into force since January 1st, 2016. SDG has set the agenda for achieving the goals by 2030. He referred to the UK initiatives on Climate Change as: lowering carbon emissions by closing down fossil fuel-based power stations and increasing clean energy to 14 GW by 2023. He informed that COP26, as the 2020 conference is known in UN jargon, will be held in UK, where tough decisions are required to be taken for implementation till the next decade.

He informed that UK, in partnership with **NITI Aayog** of India is working in various states in energy technology. These initiatives include Solar Plant of 2 GW capacity at Bengaluru, smart metering, electrical vehicles, real time monitoring of air pollution for control, etc.

Ms. Hellwig-Boette narrated the proverbial story of Everybody-Somebody-Anybody-Nobody to equate with the environment case. She said only 9 years time is available for the job of limiting earth's temperature to 1.5°C. This is a mammoth job, she added, feasible only with utmost involvement of all the nations. As for Germany, she outlined the measures taken for conservation like: closing down all the



Mr. Yugal Sikri
Managing Director
RPG Life Sciences Limited

nuclear-based power plants by 2022, closing all coal-based plants by 2038, achieve carbon footprint neutral etc. She warned that lobbyists of pharma and automobile industries are very powerful to foil the efforts towards green solutions, while “there is no lobby for environment”.

Mr. Seidman quoted Mr. David Ben Gurion, the Founding Father of Israel having said “Make the Desert



Mr. Anjum Parvez IAS
Secretary, Department of Urban Development
Govt. of Karnataka



Mr. Ravichandran Purusothaman
President - India Region
Danfoss Industries Pvt. Ltd.



Mr. Balaji Nagabhushan
Group Chief Administrative Officer
Tristar Group (UAE)



Mr. Hemant Bherwani
Scientist
CSIR - National Environmental Engineering
Research Institute (CSIR-NEERI)



Dr. (Ms.) Kalpana Gopalan, IAS
Additional Chief Secretary
Youth Empowerment & Sports Department
Govt. of Karnataka



Dr. R.N. Sankhua
Chief Engineer (S)
National Water Development Agency (NWDA)

sustainable supply chain and improvement in quality and regulatory compliance through STEM (Sustainability Through Excellence in Manufacturing), training, support initiatives, such as 'Sustainable Health in Procurement Project' (SHiPP), etc.

Mr. Sikri referred to the recent disasters attributable to climate change such as: recent deluge in Mumbai, record high temperatures in Europe, warmest June day @36.6°C in Mumbai etc. He affirmed that new jargon such as NIMBY (not in my back yard), NAMBY (not against my business or industry), SOBBY (some other bugger's back yard) - would not serve the cause of environment. He attributed the rise of new and newer disease profiles, such as zika virus, swine flu, yellow fever etc., to the changes in climate. New vectors are spreading and are being resistant-prone to powerful bacteria, he added. He further opined that by release of effluents into the water bodies and atmosphere, pharma industry though 28% smaller, is 13% more polluting than automotive sector. He noted the actions being taken by pharma industry to rectify the situation are – effective treatment of effluents, use of renewable energy, increasing green belt around the manufacturing area, reducing hazardous waste generation through better design of pharmaceutical products and processes, use of sea-going vessels for transport more than by air/road etc.

Plenary Session V: Climate Resilient Smart Cities: Opportunities for Innovative Solutions

The Session was Chaired by

- **Mr. Anjum Pervez, IAS**
Secretary, Department of Urban Development, Govt. of Karnataka.

The other speakers were

- **Mr. Ravichandran Purusothaman**
President – India Region,
Danfoss Industries
- **Mr. Balaji Nagabhushan**
Group Chief Administrative
Officer, Tristar Group (UAE) and



Mr. Saurabh Kumar
Managing Director
Energy Efficiency Services Limited



Mr. Sunil Jain
Chief Executive Officer
Hero Future Energies



Dr. R. K. Bajaj
Deputy Director General
Bureau of Indian Standards



Mr. Shaji John
Director - Power
NLC India Limited

Bloom". Though 60% of Israel is desert, it exports water. Israel had mastered the technology of desalination, 'drip irrigation', and is partnering with India in 'strategic water usage'.

Ms. Sharma narrated how irresponsible consumption of antibiotics is leading to antimicrobial resistance (AMR). "This AMR is reflection of either not taking the dose completely or using antibiotics when not even required". She lamented that antibiotics are found in 2/3rd of world's rivers. She noted the action plan for AMR containment, include: drafting better standards through technical guidance to regulators, working with independent technical experts to push research, media advocacy on impact of pharmaceutical pollution, promoting



Mr. P. Raghavendran
President - Refineries Business
Reliance Industries Limited



Mr. R. Madhavan
Chairman and Managing Director
Hindustan Aeronautics Limited



Mr. Ovais Sarmad
Assistant Secretary - General &
Deputy Executive Secretary
United Nations Framework Convention on
Climate Change (UNFCCC)



Hon'ble Justice M. N. Venkatachaliah
National Chairman
Institute of Directors and former
Chief Justice of India & Chairman,
National Commission for Constitution
of India Reforms

- **Mr. Hemant Bherwani**,
Scientist, CSIR-National
Environmental Engineering
Research Institute (CSIR -NEERI).

Mr. Pervez stated that urbanisation and development come with a big challenge to the environment, due to extreme pressure on finite resources. Demand for water, food and housing causes pollution and degradation. He referred to the commitment by Government of India at the Climate Change Congress to reduce carbon emissions by 35-40 %. He informed this requires: full conversion to electric vehicles by 2030, promoting green buildings, banning use of plastic bags, etc.

He expressed the need for integrated development of all utility services to make a city Smart. The services should cover: electricity, drinking water, service water, piped cooking gas connection, fiber / wi-fi mobility, sewage disposal, storm water drainage, solid waste disposal, fast intra-city rail-road-metro connectivity, security network, public spaces / amenities like parks, etc.

Mr. Purusothaman discussed about the global trends, India-related trends, and technologies available in the market. He said "80% of GDP in the world is created in cities. 60% of GDP is generated in 600 urban centres. Destiny of a country is dependent on what happens in cities". He said Japan has started de-urbanisation. India aims for GDP growth to \$ 5 trillion from the present \$2.7 trillion by 2025. Sand is a scarce building material, and its serious shortage is anticipated in meeting future urban growth.

He continued "technology leads to resource liberating force". He pointed out that 75% of electrical energy is being utilised in storing food in refrigeration and air-conditioning. District Cooling System as a technology option, as provided by Gujarat International Finance Tech-City (GIFT City), should be adopted in a big way in other cities too. He added the measures for climate change control should include: 'zero water discharge', electric vehicles etc. He suggested adopting

technology to utilise the excess heat available in public places like supermarkets, to charge batteries.

Mr. Nagabhushan informed there is integrated development in UAE in a smart way. He urged corporate world to look for "business with a purpose, and not business with profit". He advocated induction of hybrid cars.

Mr. Bherwani stated that the planet Earth has finite boundaries with safe operating space for humanity. He said optimum development of urban areas should be done consistent with economic growth potential. This requires understanding local conditions, identifying vulnerabilities, risks, formulating adaptation options, assess and prioritise the options, implement wisely, evaluate effectiveness and review strategies. City planning should assess the carrying capacity with available natural resources, assessing cost to provide the services with various alternatives, and conducting vulnerability studies with the geographic diversity. He informed that National Green Tribunal (NGT) is working on the model - "damage-pay".

Plenary Session VI: Water Crisis: Have we reached inflection point?

The Session was Chaired by

Dr. (Ms.) Kalpana Gopalan, IAS

Additional Chief Secretary, Youth Empowerment & Sports
Department, Govt. of Karnataka.

The fellow speaker was

Dr. R. N. Sankhua

Chief Engineer (S), National Water Development Agency, India.

Dr. Gopalan expressed the need for actionable Sustainability measures for ordinary Indian. She referred to the efficient train system in Sweden. She advocated that vertical farming and urban orchards help in city architecture. She gave an example of Shidhulai village in Bangladesh, where the region's waterways are utilised as pathways for education, information and technology, where the 'floating school' reaches the villages and helps to lift people out of poverty.



Lt. Gen. J. S. Ahluwalia, PVSM (retd.), President, Institute Of Directors, India presenting the IOD Memento to Mr. Ovais Sarmad, Assistant Secretary-General & Deputy Executive Secretary, United Nations



(From L to R) - Lt. Gen. J. S. Ahluwalia, PVSM (retd.), President, Institute Of Directors, India, Hon'ble Justice M. N. Venkatachaliah, National Chairman, Institute Of Directors and former Chief Justice of India & Chairman, National Commission for Constitution of India Reforms, Mr. Ovais Sarmad, Assistant Secretary-General & Deputy Executive Secretary, United Nations and Mr. R. Madhavan, Chairman and Managing Director, Hindustan Aeronautics Limited, during the Golden Peacock Awards Nite.

She further emphasised the importance of 'circular economy', where waste/scrap from one industry forms raw material for another industry. Quoting Jeffry Sachs, the Columbia University Professor, she said "we should exactly look at what Sustainability means to us?", and inquire "how great is the crisis?". She advocated recycling all waste including old fabrics. Use of a bucket of water instead of shower for bathing and not wasting food in buffets etc., are some important measures, she suggested for conservation.

Dr. Sankhua said interlinking the water basins is the solution for the current water crisis. There are about 20 such basins across India. He stated that only a few basin-links are completed like one across Godavari-Krishna, while several other linking projects are in planning/execution stage. This basin link work, he said needs to be pushed for effective utilisation of run-off water and its storage.

He stated about 1100 BCM of water flows to sea, which can be tapped for human needs. Of this, 2/3rd water is flowing from Ganga – Brahmaputra basins alone. The present storage capacity is about 350 BCM, which should be increased to 450 BCM.

Plenary Session VII: Sustainable Energy Supply Options

The session was Chaired by

H.E. Mr. Upendra Tripathy, IAS (retd.)

Director General, International Solar Alliance (ISA), New Delhi and former Secretary, Ministry of New and Renewable Energy, Govt. of India.

The other speakers were:

- **Mr. Saurabh Kumar**
Managing Director, Energy Efficiency Services Limited



Audience interacting with the panel



- **Mr. Sunil Jain**
Chief Executive Officer, Hero Future Energies,
- **Dr. R. K. Bajaj**
Deputy Director General, Bureau of Indian Standards, Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India
- **Mr. Shaji John**
Director – Power, NLC India Limited (formerly Neyveli Lignite Corporation of India) and
- **Mr. P. Raghavendran**
President - Refinery Business, Reliance Industries Limited.

Dr. Tripathy supplemented his morning address by adding that "ISA is also looking into the Research and Development of Technology for storing Energy". This statement was very well received by the audience.

Mr. Kumar said India has a great challenge ahead to keep its commitments on emissions. To meet increasing energy needs, the present installed capacity of 330 MW is to be doubled by 2030. Yet, India is committed by Paris Accord to halve the emissions by 2030. The actions of last few years in this regard are: about 92 lakh street lights have been changed to LED, and remote control schemes put in place. Municipal bodies have not invested much in these conversion projects, but are paying out of the accrued energy savings. Similar exercise is on with regard to replacing conventional pumps with solar pumps. There are about five million E-rickshaws on road in India. More than 50% of vehicles are still running on petrol/diesel, and plans are in place to phase out these and convert them to CNG / electric / hybrid.



Mr. Edward Millard
Director, Landscapes & Communities
Rainforest Alliance (UK)



Mr. P. S. Ramesh
Executive Director -
Group Technical Services & HR
Dynamatic Technologies Limited



Dr. K. R. Manjunath
Associate Director, EDPO
Indian Space Research Organisation (ISRO)



Mr. Pankaj Sindhvani
Chief Business Officer
Tata Cleantech Capital Limited



Ms. Poonam Sandhu
Financial Sector Specialist & India Head
Natural Resources Defense Council (NRDC)



Dr. Y.V.S. Lakshmi
Group Leader IPR,
Marketing & KMG (Bangalore), C-DOT

He added that storage batteries are still expensive. To make the renewable energy a stable source and economical too, further research / technology upgradation is needed in storage devices. He recommended energy saving through utilisation of the waste heat of engines to heat water.

Mr. Jain expressed that the key to future is “resource efficient world”. He said 44°C/45°C temperature in Paris indicates over-use of nature's resources. He drew attention to the huge quantity of solar panels that would become scrap in the decades to come. While 85 % solar panels

can be recycled, transportation is going to be humungous. Efficient reusing/recycling of Natural resources is very essential to limit climate change. There is huge business potential too in a 'circular economy'. He quoted the example of Lithium battery, where 92 % of battery can be recycled. He added that municipal solid waste is reusable but segregation at source is the challenge.

Dr. Bajaj emphasised the distinction between 'cleaner method' and 'energy conservation' to be understood and said these are two pillars of environmental protection. He said Sustainability and Renewability are used synonymously. Technology makes these distinctions clearer. Electric vehicles and battery technology are transformative rather than disruptive. He advocated more incentivisation for electric vehicles would help.

Mr. John referred to the Paris Accord and expressed that limiting global temperature to 2°C or bringing down to 1.5°C is a big challenge. He said on one side there is technological challenge and on the other side is the financial challenge. There is an urgent need to exploit every option of mitigation, and indicated a few: alternative energy sources, CO₂ sinks or negative emissions, geo-engineering, etc. He predicted China and India would see the maximum increase in power generation, as compared to the rest of the world. He said 63% of India's (356 GW) energy is from thermal sources. Per capita energy consumption in India is way below at 1149 units, as compared to 12000 in USA. With economic prosperity rising, this per capita consumption would go up even while population is also rising.

Mr. Raghavendran said not much effort has been made in the country on technology development for controlling CO₂ emissions, and even adaption is very low. He recommended close alliance between “Producers – Consumers – Technologists”. He added that two refineries of Reliance Jamnagar have sustained energy efficiency as “Soloman Benchmarking”. Another visionary idea being implemented in Reliance plant, he informed, is that emissions are controlled while producing pet coke, by absorbing SO₂ into cement. He further stated



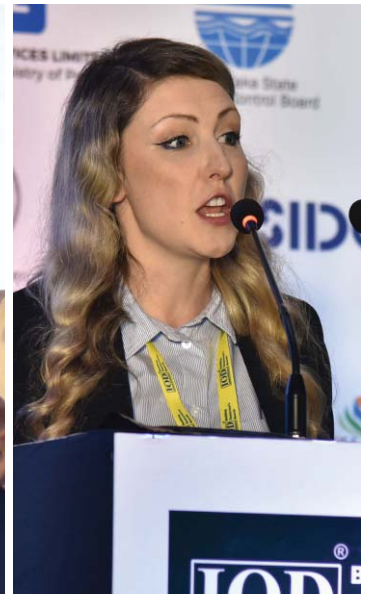
Mr. S. V. Ranganath, IAS (retd.)
former Chief Secretary
Govt. of Karnataka and Chairman
IFCI Limited



Dr. N. V. Prasad, IAS
Managing Director
Bangalore Metropolitan Transport Corporation
(BMTCL)



Mr. C. B. Ramkumar
Founder - The Sustainability Partnership
Board Member & Regional Director
Global Sustainable Tourism Council (GSTC)



Ms. Jacqueline Jackson
Senior Account Director - EMEA & ROW
Trucost (part of S&P Global, UK)

that Reliance supplies best Sulphate petrol, with all undesirable constituents eliminated. He gave examples of visionary thinking such as solar road in Amsterdam. The solar road is an energy-harvesting bike path paved with glass-coated solar panels. Solar tiles are being developed (now in R&D stage) for producing power. He added “technology opens the solutions for any crisis”.

After each technical Session, there was a detailed interaction with the audience.

The technical sessions were followed by the
'GOLDEN PEACOCK AWARDS NITE'.

Plenary Session VIII: Golden Peacock Awards Nite

Lt. Gen. J. S. Ahluwalia welcomed the Special Guests for the evening, i.e. **Hon'ble Justice M. N. Venkatachalaiah**, National Chairman, Institute Of Directors and former Chief Justice of India & Chairman, National Commission for Constitution of India Reforms, **Mr. Ovais Sarmad**, Assistant Secretary-General & Deputy Executive Secretary, United Nations Framework Convention on Climate Change (UNFCCC), and **Mr. R. Madhavan**, Chairman and Managing Director, Hindustan Aeronautics Limited.

Lt. Gen. Ahluwalia delivered the **Welcome Address**, welcoming all the

delegates, winners, and the participants. He remarked that 'competition alone brings out the best'. What started in 1991 by IOD as one Award for Total Quality, has today grown into a whole set of Awards in almost all the significant 15 verticals of modern corporates. He noted that the Award criteria are well set out, on the IOD website, and are updated annually.

He further informed that three of these Awards have become Global Awards too. Awards presented are invariably linked to the main theme of the Convention. Opportunity is given to all the awardees to speak on the initiatives undertaken by them, for improvement and excellence. He added that these success stories of winners are also brought out in a compilation hand book titled “Winners' Digest”. He invited all the participants for suggestions, towards improvement in achieving 'Business Excellence'.

Mr. Madhavan informed that Hindustan Aeronautics Limited is having 20 divisions, 11 R&D centres and an annual turnover of INR 200 billion. It has invested in Green Energy Solutions in a big way, meeting 50% of its energy needs today, and to meet 80% in 3 years' time. Water harvesting is done in all manufacturing plant areas. HAL, he said had also taken up river rejuvenation, in a big way in Karnataka.

Mr. Sarmad stated “engagement with private sector is a delight”. He



A view of audience



Mr. Anirban Ghosh
Chief Sustainability Officer
Mahindra Group



Mr. Niranjan Khatri
Board Member
Sarbhak Educational Trust and
former General Manager
Environment Initiatives, ITC Hotels

said UNFCCC is a custodian of Paris Accord and 185 countries are its members. Drawing the attention of the large audience to the Paris Accord on Climate Change and its implementation, he said four features make up the important part of the agreement, namely: Limiting the Global Temperature rise @ 1.5°C; Carbon neutrality by 2050; reduction of Carbon emissions by 45% by 2030. By 2020, IGCC, Inter Governmental Climate Change – all governments need to work out ambitious financial, technical and implementation perspectives. In this gigantic effort, all the stakeholders - private sector, civil society and individuals also need to contribute. The moot question before the society is: “Is economy more important or environment more important?” The present generation, he observed has a “responsibility towards the next generation, to hand over what has been borrowed from earlier generations”. He concluded his address by saying: “Climate change is happening faster than actions. Hence the urgency!!”

Hon'ble Justice M. N. Venkatachalaiah recalled his long association with IOD, since its inception. Though a student of law, he knew more on corporate matters through this association of over 20 long years. Elaborating on this, he said it is pertinent to note that changes happen in corporate world all the time. If world has witnessed 'controlled fission' in 1945, in 1953 the very guarded human genome code had been broken, and *Secret of DNA, role of genes that control the chemical processes within cells was revealed*. The present era belongs to “Machine Intelligence”, he said. Speaking on the role of IOD, he added – “IOD looks beyond the balance sheet of a company”. It aims to “mould policy of business, and looks for emergence of better society”. He remarked that France and Germany were very bitter enemies, much more than the animosity that exists between India and Pakistan. The point to be noted, he said is *how the European Union (EU) came into being with one common currency*, in spite of having members so opposed to each other earlier. Recalling an anecdotal experience with H.E. Dalai Lama, when he was asked, whether there exists a possibility of India-Pakistan-Bangladesh-Sri Lanka going into a Union, Dalai Lama just smiled. “Well, the societies involved should look for the possibility

that would help all the countries and broadly improve the environment too”.

He advocated that boardrooms should develop 'Collective Policy Guidelines'. He said the world is today divided not by ideology, but by technology. Having enormous thinking power and talent in finance, technology, research - corporates can collectively bring about 'EU like' associations.

The '**Golden Peacock Awards for Environment Management and Occupational Health & Safety**', in different business sectors were presented to the winning organisations. Institution - wise detailed list of winners of Environment Management and Occupational Health & Safety have been listed separately in this Issue. All Awardees received the Awards in person.

The Awards Ceremony was followed by a formal Banquet, at the venue.

Day-2: Friday, July 5, 2019

Plenary Session IX: Success Stories on Effective Implementation of Energy Efficiency and Eco-Innovation

The session was Chaired by **Mr. Arun Balakrishnan**. A list of companies which made their respective presentations in the 'Energy Efficiency' category is as follows:

1. India Yamaha Motor Private Limited
2. Toyota Kirloskar Motor Private Limited
3. National Fertilizers Limited
4. Kirloskar Oil Engines Limited
5. Apollo Hospitals International Limited
6. Tamil Nadu Newsprint and Papers Limited

A list of companies which made their respective presentations in the '**Eco-Innovation**' category is as follows.

1. Praj Industries Limited
2. Tata Steel Limited, Dhanbad
3. Alok Masterbatches Private Limited.
4. Divyesh Power Private Limited (A Greenko Group Company)

The very useful presentations were followed by a detailed audience interaction.

Plenary Session X: Green Growth Solutions through Market-based Instruments

The Session was Chaired by

Mr. Edward Millard

Director, Landscapes & Communities, Rainforest Alliance (UK).

The other speakers were

Mr. P. S. Ramesh

Executive Director – Group Technical Services & HR, Dynamatic Technologies Limited

Dr. K. R. Manjunath

Associate Director, EDPO, Indian Space Research Organisation (ISRO)

Mr. Pankaj Sindhwani

Chief Business Officer, Tata Cleantech Capital Limited

Ms. Poonam Sandhu

Financial Sector Specialist & India Head, Natural Resources Defense Council (NRDC) and



Audience interacting with the panel



A view of audience

Dr. Y.V.S. Lakshmi

Group Leader IPR, Marketing & KMG (Bangalore), C-DOT.

Mr. Millard referred to the Corporate Social Value (CSV), as against Corporate Social Responsibility (CSR). He stressed the need to involve the upstream farming community in addition to the downstream companies in the solutions to environmental challenges. He said that **Sustainability** has three traditional major pillars, where it is needed to promote development – namely, the economic dimension (**Profit**), the environmental dimension (Planet), and the social dimension (**People**). Mr. Millard emphasised on the importance of the fourth Pillar i.e., (Processes). He said the Millennium Development Goals (MDG) though launched in 2000, are not quoted as much as Sustainable Development Goals (SDG) which took effect in 2015. The outdated MDGs had 8 goals, while SDG had 17 goals which were delineated and redefined to a certain extent from the MDG goals. The reason for more prominence to SDGs emanates, he felt, is from the seriousness of the climate change effects seen in the intervening period. Presence of amphibians in the surroundings shows the delicate health of the planet earth. India imports palm oil from Indonesia, but the consequence of this is the deforestation in that region.

Mr. Ramesh stated that Dynamatic Technologies (DTL) is a 25-year old Indian MNC company, involved in precision engineering for building complex aero-structures with presence in Germany and UK. He added that DTL has its own R&D centre and is a global tier 1 supplier to Airbus, Boeing and Bell helicopters. Its 'design thinking tool' is adopted in DTL with innovation at its core, and environmental protection as a priority. Their manufacturing plant is uniquely designed with composite panels for the walls, heat reflective roof, natural lighting and ventilation. To ensure environmental protection, green electrical power is derived from green sources, such as solar and bio-gas plants installed. Rain water harvesting, use of LED bulbs, compost generation and drip irrigation are the other measures. Scooped aluminium scrap is reused by melting, he informed.

Dr. Manjunath said ISRO's space inputs through satellite images help in sustainable development and climate change studies. The information generated is: natural resources inventory, disaster mapping, cartography mapping, oceanographic studies, weather mapping, etc. The information so gathered is analysed by experts who interpret them for assessment of different parameters such as ground water, crop studies, monitoring waste lands, fisheries, etc. He said ISRO also delineates hazard zones and provides early warnings. ISRO also helps in green house gas (GHG) emissions through sensors deployed on satellites. As for space debris, he said international

protocols are being followed.

Mr. Sindhwani informed that Tata Greentech Capital (TGC) is a joint venture between Tata Capital and International Finance Corporation, and was established in 2011 with \$ 100 mn green climate fund. He said TGC is a Green Bank and focuses on funding and advisory solutions. He explained through examples of Charachachapa (Maharashtra) and Parsa (Bihar) villages, where TGC had funded to bring new entrepreneurial ventures into existence. Even though situated only 75 km from Mumbai, he said the village Charachachapa didn't have electricity till 2017. With electricity reaching the village, multiple benefits including water access will happen from the nearby Tansa Lake, which supplies 50% water needs of Mumbai city. Similarly, he said electricity reaching Parsa village had enabled power supply to hospital (for blind). He said the goal of TGC is development and earn profit, but that is not its main motive. TGC also invests in mainstream projects and has funded approximately 5.2 GW of RE power, saving on huge CO₂ emissions.

Ms. Sandhu said, NRDC is a 'not-for-profit' membership organization with more than three million members and online activists. She added that NRDC's work helps to safeguard the rights of all people to air, water, and wildlife. Operating in India for over a decade now, she said NRDC's India programme has advanced clean energy and public health solutions, while fighting climate change. She spoke about green banking and informed that The Indian Renewable Energy Development Agency IREDA is one such green bank in India in public sector domain, with the aim of promoting environment-friendly practices and reducing carbon footprint. She informed that there exists a bright scope for increasing roof-top solar installations, and felt this window is underserved, as of now.

Dr. Lakshmi stated that C-DOT has been established for telecom technology development. Since 1984, it has been developing state-of-the-art telecommunication technology to meet the growing needs of Indian telecommunication network. Telecom development has brought all round socio-economic development and even remote rural areas are being connected with wi-fi. With the availability of Internet, the different communities are able to access various services and benefits from vast information related to education, technology, weather, tele-medicine etc – and all this in local languages too. National Digital Communication Policy (NDPC) 2018 aims to incentivise the use of renewable energy technologies in the communication sector, and promote research and development (R&D) in this area. Use of small cell fuel batteries, lithium-ion batteries, etc. to improve energy consumption efficiencies is encouraged, she added.



Audience interacting with the panel



Plenary Session XI: Environmental Sustainability and Climate Change

The Session was Chaired by

Mr. S.V. Ranganath, IAS (retd.)

former Chief Secretary, Govt. of Karnataka and Chairman, IFCI.

The other speakers were:

Dr. N. V. Prasad, IAS

Managing Director, Bengaluru Metropolitan Transport Corporation (BMTC)

Mr. C. B. Ramkumar

Founder – The Sustainability Partnership, Board Member & Regional Director, Global Sustainable Tourism Council (GSTC)

Ms. Jacqueline Jackson

Senior Accounts Director – EMEA & ROW, TRUCOST (part of S&P Global, UK)

Mr. Anirban Ghosh

Chief Sustainability Officer, Mahindra Group and

Mr. Niranjana Khatri

Board Member, Sarthak Educational Trust and former General Manager, Environmental Initiatives, ITC Hotels

Mr. Ranganath said that 2016 has been the warmest year with simultaneous changes in rainfall and extreme weather patterns. “India is the fourth most vulnerable in terms of climate-related crises”. He added that as per Inter-governmental Panel on Climate Change (IPCC, 2007), future climate change is likely to affect agriculture, increase the risk of hunger and water scarcity, and lead to more rapid melting of glaciers. Freshwater availability in many river basins in India is likely to decrease due to climate change. This decrease, along with population growth and rising living standards, could adversely affect many people in India by the 2050s. He further observed that Mr. Eric Maskin, the Nobel Prize recipient, propounded 'Mechanism Design Theory' in 2007, that has applications concerned with climate change.

Dr. Prasad said BMTC uses softened water in workshops to reduce corrosion. BMTC buses are tested for pollution on a periodical basis. By 2021, BMTC would go for vehicles complying with BS-VI norms, he said. He recommended investment in R&D to reduce the weight of battery, which currently takes a heavy weight in electric vehicle so as to improve efficiency.

Mr. Ramkumar opined that only a minority of companies are working on climate change goals, while a majority still feel 'business as usual is

more comfortable'. Since section 135 of Companies Act, 2013 on CSR policy touches only large companies (turnover > INR 1000 crore / net worth INR 500 crore / net profit of INR 5 crore), majority of the corporates are out of the ambit, he lamented. He noted that it is time to bring the MSME companies under the CSR fold, in an institutional format. He felt that “NITI Aayog, the custodian of SDGs and for reporting to the UN, should publish the data so that it is transparent, and peers would know the work of other peers”.

Ms. Jackson said there is a negative correlation between water pricing and water scarcity. There is a huge business opportunity for corporations to help meet the SDG goals, she observed. Each sector in SDG goals has a business potential for the implementation of entire Paris Accord till 2030, with the cumulative value of \$ 23 trillion. TRUCOST, she said is a social and economic Business Intelligence (BI) firm providing 'Data Analytics' with respect to climate change, and Natural resource constraints on broader social, environmental and governance factors. She noted that TRUCOST has developed SDG evaluation tool that evaluates the quantitative analysis of corporate performance on SDGs, across the value chain.

Mr. Ghosh felt that the precipitation in India is good, and what is desired is the mechanism to hold the water and recharge the underground aquifers. He recommended a few measures to tackle the climate crises such as “using electricity everywhere, but decarbonising electricity generation by going for green sources”, investing in technology to cut down the cost of storing energy and investing in design for circular economy to reach 'landfill free nation'. He proposed for 'scale of operations' for the known obvious solutions like using LED bulbs, solar power from roof top, trees that act as 'Carbon sink' etc.

Mr. Khatri stated that water conservation is the need of the hour, with rain water harvesting and recycling of waste water as priority. He advocated setting up a Bureau of Water Efficiency (BWE) for effective monitoring. He suggested use of bamboo cultivation in a big way for use in house construction, especially in rural areas. Use of cow manure to make bio-gas is another area not addressed in a comprehensive way, he felt. About 1.3 billion tons of cow dung is produced across the country that can be leveraged for bio-gas generation. This gas would be useful in cold storage units in rural areas. He suggested that tax (GST) on green building materials be brought down to 5% (from the current 18%).

Thereafter, there were two Concurrent Sessions on Case Study presentations.



A view of audience



Plenary Session XII A: Success Stories on Effective Implementation of Environment Management

The Session was Chaired by **Mr. R. G. Rajan**, former Chairman & MD, RCF Limited, former Chairman, SCOPE & FAI, and former Hony. Chairman, IOD - Mumbai Region.

A list of companies which made their respective presentations in the 'Environment Management' category is as follows:

1. Hyundai Motor India Limited
2. Concentrix Daksh India Services Private Limited
3. UltraTech Cement Limited, Baga Cement Works
4. Reliance Industries Limited, Vadodara Manufacturing Division
5. J. K. Cement Limited, JK Cement Works
6. Godrej Industries Limited, Chemical Division
7. Bharat Heavy Electricals Limited
8. Infosys Limited
9. National Aluminium Company Limited
10. Oil and Natural Gas Corporation Limited
11. NTPC Limited, Dadri
12. Steel Authority of India Limited
13. Jindal Stainless (Hisar) Limited

The presentations were followed by detailed audience interaction.

Plenary Session XII B: Success Stories on Effective Implementation of Occupational Health & Safety

The session was chaired by **Mr. S. Srinivasan, IAS (retd.)**, former Secretary to Govt of India & Member - Finance, Indian Space Research Organisation (ISRO).

A list of companies which made their respective presentations in the 'Occupational Health & Safety' category is as follows:

1. Goodrich Aerospace Services Private Limited
2. Tata Motors Limited
3. MAHLE ANAND Filter Systems Private Limited
4. My Home Industries Private Limited
5. L&T STEC JV, UGC 07, Mumbai Metro Rail Project
6. Nestle India Limited
7. Cummins India Limited, Power Generation Business Unit
8. Hetero Labs Ltd., Unit V
9. BSES Yamuna Power Limited
10. Anheuser Busch Inbev (India) Limited

The presentations were followed by detailed audience interaction.

After the conclusion of the Sessions and the Congress, IOD thanked all

the speakers, guests and participants. All the winners and applicants of Golden Peacock Awards were commended for their support, for the success of the Conference.

Special Thanks were conveyed to the foreign diplomats from UK, Germany, and Israel who all addressed this international gathering.

The media, especially the REPUBLIC TV Channel, were conveyed the gratitude of the IOD for covering the event so comprehensively.

Special Thanks were also conveyed to all the senior officials, partners and speakers, especially the Govt. of Karnataka and its Chief Secretary, for partnership for the Congress.

Thanks were also conveyed to Bengaluru International Airport for being Platinum Partner, Karnataka Udyog Mitra and Titan Company for being Gold Partners, and GHCL, HAL, Hero Future Energies, BIS, BMTC, BEML and Manipal Education and Medical Group for being Silver Partners. Several other Bronze Partners were also thanked, along with Associate & Supporting Partners. The list is contained elsewhere in this Issue.

ONGC was specially thanked for being the Green Initiative Supporting Partner.

The Hotel authorities of JW Marriott were also thanked for their excellent Service.

The entire deliberations during over India, by the REPUBLIC TV hour each day.

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